V24-C

V-Panel™ 24” HD Touch Screen Displays

- *High-Definition 24” widescreen display*
- *Capacitive touch screen technology*
- *1920 x 1200 WUXGA display resolution*
- *High-definition 24-bit graphics powered by Core 3™*
- *High-performance S-PVA display technology*
- *Rich, accurate color reproduction*
- *High 6ms speed response*
- *High contrast ratio, high aperture, high color gamut*
- *Ultra-wide 178 degree viewing angles*
- *Fully HDCP compliant*
- *Digital Graphics Engine (DGE-2) installs up to 330 ft away[1,3]*
- *Also works with DVPHD and DVPHD-GB Digital Video Processors[1,3,5]*
- *Single wire DigitalMedia 8G+™ connectivity*
- *Compatible with DigitalMedia™ switchers and transmitters*
- *Built-in HD scaler enables full-screen video without a DGE*
- *USB keyboard/mouse port*
- *VESA 100x200 mounting option*
- *Stylish flush wall and lectern mount options*
- *Available in white or black*

The V-Panel V24-C merges high-definition Crestron® touch screen control and HD video in one stylish and versatile 24” touch screen display. Its generous WUXGA screen delivers stunning video performance even at extreme viewing angles, providing an exceptional HDTV or computer display solution with integrated touch screen functionality powered by the groundbreaking Core 3 UI™.

The V24-C suits a broad range of residential and commercial applications, excelling as a home controller and television display for a luxury kitchen or bedroom, as a presentation control panel for a university lecture hall, or as a video control surface for corporate and government command centers. The choice of flush in-wall, lectern, or VESA mounting affords a clean, modern appearance for any custom installation.

The V24-C replaces separate touch screens, TV displays, and computer monitors with one gorgeous device. Whether mounted flush in a wall or on a wall bracket, desk stand, or articulating arm, its streamlined design allows it to be installed virtually anywhere. Complete connectivity is provided through a simple one-wire interface that allows for long wire runs while affording a clean appearance. Together with a DGE-2 Digital Graphics Engine[1], the V24-C delivers a powerful and elegant touch screen control solution featuring advanced Core 3 UI touch screen graphics, dual-window HD video, high-performance H.264 streaming video[2], onboard multimedia and Web browsing, and built-in annotation.

Beyond High-Definition Video

With a display resolution of 1920 x 1200, the V24-C provides substantial real estate for all kinds of custom controls and icons with true feedback and real-time status display, full-motion video windows, and advanced navigation of digital media servers, tuners, and other devices. The 16:10 aspect ratio allows a full HD 1080p video image to appear full size along with a custom control bar, providing immediate access to AV and lighting controls, clock and weather widgets, scrolling text and other objects while simultaneously watching TV or viewing a video camera.

The V24-C employs high-performance S-PVA display technology to deliver an optimum HD experience with rich, accurate color reproduction, high speed response, and excellent black depth and contrast. Ultra-wide 178 degree horizontal and vertical viewing angles ensure consistent picture quality on and off axis, alleviating the need to be directly in front of the screen when reaching for an on-screen control or just catching the morning news.

Digital Graphics Engine

For a typical control application using the V24-C, a DGE-2 Digital Graphics Engine is also required.[1] The DGE-2 can be installed at the central equipment location, dramatically reducing all the wiring from head end AV sources, switchers, and the control network. A single CAT5e or DigitalMedia 8G™ Cable connects the V24-C to the DGE-2 over a wiring distance of up to 330 feet (100 m), affording exceptional flexibility while minimizing wiring cost and complexity.[3]

Powered by Core 3™

Crestron touch screens have always offered the ultimate user experience. With Core 3 UI, they also deliver the ultimate value, enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Core 3 UI, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, embedded apps, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

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Some Core 3 UI enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to assign AV sources to rooms.
- Desktop widgets personalize the touch screen with animated clocks, calendars, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects™ enable sophisticated control over complex devices with minimal programming.
- SmartScaling™ resizes objects perfectly and instantly for faster GUI development — even across different sized touch screens.

Embedded PC Applications

In combination with a DGE-2 graphics engine, the V24-C provides everything you need to enjoy online music and videos, browse the Internet, and even review digital documents without a separate computer. With Microsoft® Internet Explorer® embedded, you have full access to the entire World Wide Web including sites that use Flash® or Java™. Windows Media® Player ensures broad compatibility for playing most types of digital media. Adobe® Acrobat® Reader and Microsoft PowerPoint®, Word, and Excel® document viewers complete the online experience, allowing you to download and view documents and presentations.

In addition, VNC Viewer support delivers enhanced cross-platform interaction with computers over the network or Internet, allowing remote access and control of desktop applications to unleash a host of possibilities for system integration and multimedia presentation.

HD Streaming Video[2]

High-definition streaming video capability makes it possible to view security cameras and other video sources over the network. Native support for H.264[2] and MJPEG formats allows the V24-C and DGE-2[1] to display live video images from Web cameras and servers such as the Crestron CEN-NVS200 Network Video Streamer[1]. And, through the embedded Web browser and media player, they support a wide variety of other streaming and downloadable video formats, enabling access to all kinds of content from media servers and Web sites like YouTube® and Netflix®[4].

HDMI® and Analog Video

In addition to handling streaming video, the V24-C can simultaneously display up to two fully-scalable, full-motion video windows, each supporting HD or SD video and high-resolution computer signals from external sources. All connections are made at the DGE-2 using conventional HDMI, VGA, and BNC type cables.

HDCP Support

Industry-leading support for HDCP (High-bandwidth Digital Content Protection) ensures seamless compatibility with content-protected DVD, Blu-ray Disc®, digital HDTV, and multimedia computer sources.

Keyboard/Mouse Options

On-screen keyboard and mouse capabilities enable complete control of the embedded Web browser and other applications. A USB port is also provided on the V24-C, allowing for the connection of a physical keyboard and mouse.

Real-Time Annotation

Whether conducting a high-level boardroom meeting, training seminar, or watching sports in your home theater, annotation helps put the fine point on any presentation. Built-in annotation provides the ability to illustrate your thoughts on-the-fly, letting you draw and write over high-definition video and computer images, and sketch out ideas on a whiteboard screen, without leaving the podium or your favorite chair while other viewers watch on the big screen.

Remote Annotation

Remote annotation capability allows multiple touch screen users to draw with their fingertips over the same video image or whiteboard screen, enabling enhanced interaction between several participants in a court-room, classroom, or council chamber.

Presentation Output

Through an HDMI or DigitalMedia™ connection at the DGE-2, the V24-C screen image can be sent to additional display devices, allowing videos, PowerPoint presentations, annotation, and other on-screen media to be shared with a live audience. Audio can also be enabled using powered speakers or a larger audio system connected to the DGE-2’s HDMI, DigitalMedia, or analog audio outputs.

DigitalMedia™

DigitalMedia (DM®) connectivity opens up new ways to configure a touch screen control system. For instance, using a DM switcher such as the DM-MD8X8[1], multiple V24-C touch screens can be connected to a single DGE-2, providing a simple, cost-effective way for multiple participants to view and control the same graphical interface. DigitalMedia also provides a versatile means for distributing touch screen content to additional display devices and sound systems to serve a larger audience.

The V24-C features a DM 8G+™ type input, supporting the connection to a DGE-2 Digital Graphics Engine via a DM 8G+ transmitter (DM-TX-201-C or equivalent[1]). It can also connect directly to any DM switcher equipped with a DM 8G+ output. A single CAT5e or DigitalMedia 8G cable carries all video, audio, Ethernet, USB, and control signals up to 330 ft (100 m).[3]

DVPHD Integration

In addition to the DGE-2, V-Panel is also compatible with the award-winning DVPHD High-Definition Digital Video Processor[1], enabling the display of up to 8 simultaneous video windows along with HD touch screen graphics and annotation. The DVPHD supports high-definition video and computer signals from a wide variety of digital and analog sources. Its DVI output connects to the V24-C via a DM 8G+ transmitter or DigitalMedia switcher.[3,5]

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SPECIFICATIONS

Touch Screen Display

Display Type: TFT active matrix color LCD
Size: 24 inch (610 mm) diagonal
Aspect Ratio: 16:10 WUXGA
Resolution: 1920 x 1200 pixels
Brightness: 300 nits (cd/m^2)
Contrast: 1000:1
Response Time: 6 ms G-to-G
Color Depth: 24-bit, 16.7M colors
Illumination: Backlit fluorescent
Viewing Angle: ±89° horizontal, ±89° vertical
Touch Screen: Capacitive

Buttons & Indicators

Hard Key: (1) Programmable pushbutton, illuminates green to indicate power is on, reboots the DGE if held for 5 seconds
DM 8G IN (Rear): (2) LEDs, green LED indicates DM link status, amber LED indicates DM signal stream and HDCP status

Communications

DigitalMedia™: DM 8G+™, HDCP, EDID, 100 Mbps Ethernet
USB: USB 1.1 host, supports USB HID class devices

Video

Input Signal Type: DM 8G+ (DigitalMedia over one CAT5e twisted-pair copper wire)
Input Resolution: 1920x1200@60Hz native, or any other progressive resolution up to 1920x1200@60Hz
Refer to DGE-2 or DVPHD specifications for additional information.

Connectors

24VDC 3.7A (V24-C and V24L-C models): (1) 2-pin 5mm detachable terminal block, 24 Volt DC power input;
Connects to V24-IMCW-C interface module via V-CBL-SC cable[6];
PW-2435RU power pack included

24VDC 3.7A (V24-WALL-C model): (1) 2-pin 5mm detachable terminal block, 24 Volt DC power input;
PW-2435DUL power pack included

DM 8G IN (V24-C and V24L-C models): (1) 8-pin RJ45 female, shielded, DM 8G+ input;
Connects to V24-IMCW-C interface module via V-CBL-SC cable[6]

DM 8G IN (V24-WALL-C model): (1) 8-pin RJ45 female, shielded, DM 8G+ input;
Connects to DM 8G+ output of a DM transmitter or switcher via CAT5e or Crestron DM-CBL-8G cable[3]

USB HID: (1) USB Type A female;
USB 1.1 host port for connection of a mouse/keyboard or other USB HID-compliant device

PEN: (1) 8-pin RJ45 female, shielded;
not used at this time

PEN SWITCH: (1) 2-pin 3.5mm detachable terminal block;
not used at this time

Power Requirements

Power Pack: 3.7 Amps @ 24 Volts DC;
100-240 Volt AC, 50/60Hz power pack included;
V24-C and V24L-C models include PW-2435RU power pack, which connects to the V24-IMCW-C interface module[6];
V24-WALL-C model includes PW-2435DUL power pack, which connects directly to the touch screen

Environmental

Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 291 BTU/Hr

Enclosure

V24-C: Plastic case, VESA 100x200 mm mountable
V24-WALL-C: Includes metal rear enclosure with plastic front bezel, additional mounting accessory required[1,7]
V24L-C: Includes metal rear enclosure with plastic front bezel, fan-cooled, additional mounting accessory recommended[1,7]

Dimensions

V24-C:	Height: 15.52 in (395 mm); Width: 23.09 in (587 mm); Depth: 2.81 in (72 mm)
V24-WALL-C:	Height: 16.79 in (427 mm); Width: 24.44 in (621 mm); Depth: 3.43 in (87 mm)
V24L-C:	Height: 16.79 in (427 mm); Width: 24.44 in (621 mm); Depth: 3.43 in (87 mm)

Weight

V24-C: 21.5 lb (9.76 kg)
V24-WALL-C: 24.0 lb (10.89 kg)
V24L-C: 24.6 lb (11.16 kg)

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MODELS & ACCESSORIES

Available Models

V24-C-B: V-Panel™ 24” VESA Mount HD Touch Screen Display, DM 8G+, Black
V24-C-W: V-Panel™ 24” VESA Mount HD Touch Screen Display, DM 8G+, White
V24-WALL-C-B: V-Panel™ 24” Wall Mount HD Touch Screen Display, DM 8G+, Black
V24-WALL-C-W: V-Panel™ 24” Wall Mount HD Touch Screen Display, DM 8G+, White
V24L-C-B: V-Panel™ 24” Lectern Mount HD Touch Screen Display, DM 8G+, Black
V24L-C-W: V-Panel™ 24” Lectern Mount HD Touch Screen Display, DM 8G+, White

Included Accessories

PW-2435RU: Regulated Universal Power Pack (Qty. 1 included with: V24-C-B, V24-C-W, V24L-C-B, V24L-C-W)
PW-2435DUL: Regulated Universal Power Pack (Qty. 1 included with: V24-WALL-C-B, V24-WALL-C-W)
V24-IMCW-C: Interface Module (Qty. 1 included with: V24-C-B, V24-C-W, V24L-C-B, V24L-C-W)
V-CBL-S6C-B: V-Cable Siamese Cable, DM 8G+™, 6 ft, Black (Qty. 1 included with: V24-C-B, V24L-C-B)
V-CBL-S6C-W: V-Cable Siamese Cable, DM 8G+™, 6 ft, White (Qty. 1 included with: V24-C-W, V24L-C-W)

Available Accessories

DGE-2: Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity
DM-TX-201-C: DigitalMedia 8G+™ Transmitter 201
V24-IMCW-C: Interface Module
V-CBL-SC: V-Cable Siamese Cable, DM 8G+™
DM-CBL-8G-NP: DigitalMedia 8G™ Cable, non-plenum
DM-CBL-8G-P: DigitalMedia 8G™ Cable, plenum
DM-8G-CONN-100: DigitalMedia 8G™ Cable Connector, 100-Pack
DM-8G-CRIMP: Crimping Tool for DM-8G-CONN
BB-V24: Back Box for V24-WALL-C
BBI-V24: Back Box for V24-WALL-C - International Version
PMK-V24: Pre-Construction Mounting Kit for V24-WALL-C and V24L-C

Notes:

1. Item(s) sold separately.
2. Support for H.264 video is a future feature of the DGE-2 that will be enabled through a future firmware release. Current streaming video support includes MJPEG and Windows Media Player.
3. The V24-C features a DM 8G+ type input. Connection to a DGE-2 or DVPHD requires a DM 8G+ transmitter or DM switcher. For wiring up to 330 ft (100 m) in length, use Crestron DM-CBL-8G DigitalMedia 8G Cable or generic CAT5e (or better) UTP or STP. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance. Refer to the DigitalMedia Infrastructure Guide, Doc. #4556 for DM wiring guidelines, and the Crestron DigitalMedia Design Guide, Doc. #4789 for DM system design guidelines. The V24-C and V24L-C models each include (1) V-CBL-S6C 6 ft V-Cable and V24-IMCW-C wall mount interface module. The V24-WALL-C model includes no cable or interface module. For complete information, please refer to the spec sheet for each individual product, or contact your Crestron representative.
4. Accessing Netflix content requires an active Netflix account. See www.netflix.com for details.
5. An Ethernet-enabled control system and DM 8G+ interface are required for use with a DVPHD. Be advised, DVPHD does not support streaming media, Web browsing or other embedded PC functionality.
6. Items included. Refer to the spec sheet for each item for additional information.
7. V24-WALL-C model must be installed in an upright position with the screen perpendicular to the floor. V24L-C model may be mounted in an angled lectern or table top. Allow adequate space at the top and bottom of the rear housing for proper ventilation.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

Specifications subject to change without notice. Crestron is not responsible for errors in typography or photography.

The specific patents that cover Crestron products are listed at www.crestronpatents.com.

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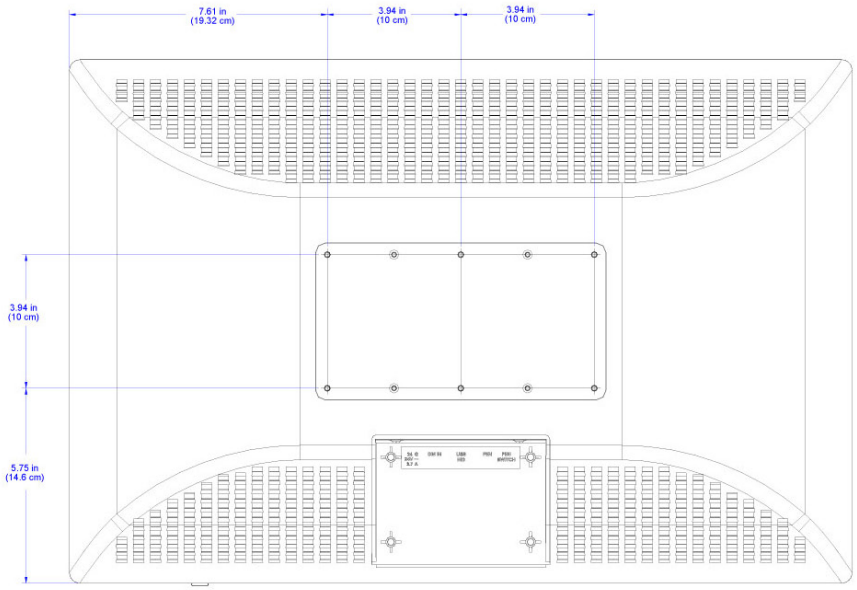
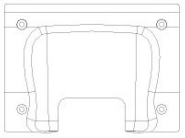


Cover removed to show connector placement



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